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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,179	02/26/2002	Nobuhiko Takekoshi	03500.016224	2417

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EXAMINER

CHAN, SING P

ART UNIT PAPER NUMBER

1734

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,179

Applicant(s)

TAKEKOSHI, NOBUHIKO

Examiner

Sing P Chan

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1, 3-8 during the telephone interview on December 10, 2003 are withdrawn in view of the newly discovered reference(s) to Masuda et al (U.S. 4,985,720). Rejections based on the newly cited reference(s) follow.

Drawings

2. Figure 9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Masuda et al (U.S. 4,985,720).

Regarding claim 1, the admitted prior art discloses a laminating apparatus for ink jet recording medium. The apparatus includes a conveying means for conveying the

medium, drying means for drying the ink on the medium, and laminating means for laminating a film onto the imaged surface. (Specification, Page 3, line 1 to Page 4, line 22) The admitted prior art does not disclose a control means to control the temperature of the drying means at a predetermined temperature of T1 before the medium arrives at the drying means and adjusting the temperature of drying means to T2, which is greater than T1, when the medium is being dry. However, providing a temperature control for drying means to adjust the temperature from T1 to T2 during drying is well known and conventional as shown for example by Masuda et al. Masuda et al discloses an apparatus for drying photosensitive material with means for controlling the temperature of drying means. The apparatus includes a temperature sensor, which maintains the heating section at a standby temperature, a film sensor detects the film or sheet material and switch the drying heater on to increase the temperature of the drying means to the operation temperature, which is greater than the standby temperature. (Col 6, lines 38-68)

It would have been obvious to one skilled in the art at the time the invention was made to provide a temperature control means for the drying means as disclosed by Masuda et al in the apparatus of admitted prior art to reduce the energy use during non-drying period, which reduce cost of operation.

Regarding claim 3, the admitted prior art discloses upper and lower drying roller for contacting the surface of the medium. (Specification, Page 3, lines 15-21)

Regarding claim 7, the admitted prior art discloses the image is formed by an ink jet apparatus, which is considered to include a recording head.

5. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Masuda et al (U.S. 4,985,720) as applied to claims 3 and 7 above, and further in view of Ueda et al (U.S. 5,217,561).

Regarding claim 4, the admitted prior art as modified above is silent as to the drying roller is rotated by one revolution after the temperature is changed by the heater. However, one in the art would logically rotate the drying roller by one revolution after the temperature is changed by the heater to avoid any hot spot on the roller. For example, Ueda et al discloses a laminating apparatus. The apparatus includes temperature and transport speed control, which is considered capable of controlling the lower drying roller and transport the medium to the drying roller before the lower drying is rotated by one revolution after the temperature is changed.

It would have been obvious to one skilled in the art at the time the invention was made to logically rotate the drying roller by one revolution after the temperature is change prior to the medium arrive at the drying roller in the apparatus of the admitted prior art to avoid any hot spot and to properly dry the medium.

Regarding claim 8, the admitted prior art as modified above is silent as to the recording head has an electrothermal converter for generating thermal energy for discharging ink. However, using an electrothermal converter for generating thermal energy for discharging ink is well known and conventional as shown for example by Ueda et al. Ueda et al discloses an electrothermal converter for the ink jet to generate thermal energy to discharge ink. (Col 9, lines 58-68)

It would have been obvious to one skilled in the art at the time the invention was made to provide an electrothermal converter for the ink jet recording head to generate thermal energy to discharge ink as disclosed by Ueda et al in the apparatus of the admitted prior art, which is readily available and easily obtained.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Masuda et al (U.S. 4,985,720) as applied to claim 1 above, and further in view of Sheldon (U.S. 4,879,268).

The admitted prior art as modified above does not disclose a heat transferring head disposed at a side of a surface and a roller disposed at a side of a back surface of the laminate object. However, one in the art would appreciate any heating means can be used to laminate the film onto the transfer sheet. For example, Sheldon discloses a heat transfer head with a roller opposite position for sandwiching the transfer sheets in between to heat and transfer a coating onto a surface of a sheet. (Col 2, lines 53-62)

It would have been obvious to one skilled in the art at the time the invention was made to provide a heat transfer head opposite a roller as disclosed by Sheldon in the apparatus of admitted prior art to provide a simpler heating mechanism for heating the laminate and reducing the required energy usage and reduce operating cost.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Masuda et al (U.S. 4,985,720) and Sheldon (U.S. 4,879,268) as applied to claim 5 above, and further in view of Hanabusa (JP 62-233264).

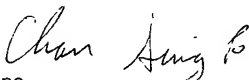
The admitted prior art as modified above is silent as the heat transferring head has an electrothermal converter. However, providing an electrothermal converter is well

known and conventional as shown for example by Hanabusa. Hanabusa discloses a heat transferring head with an electrothermal converter to heat the head, which provide good adhesion to the laminate layer with heat efficiently requiring little electric power. (Page 4, Col 1, lines 5-16, as translated by translator)

It would have been obvious to one skilled in the art the time the invention was made to provide electrothermal converter in the heat transfer head as disclosed by Hanabusa in the apparatus of admitted prior art to provide heating energy to the heat transfer head efficiently with a low requirement of electric power for reducing operating cost.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P Chan whose telephone number is 571-272-1225. The examiner can normally be reached on Monday-Friday 7:30AM-11:15AM and 12:15PM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


spc

